D. Remarks:

Introduction

Claims 1-35 are pending. Claims 1-6, 7-11, 15-19, 21, 23-26 and 33 are amended. No new matter is introduced with these amendments.

Claim Objections

Claims 25 and 26 are objected to under 35 C.F.R. §1.75(c) as being of improper dependent form. Claims 25 and 26 have been amended to place them in proper dependent form. Applicant respectfully submits that the amendments to Claims 25 and 26 obviate the Examiner's objections. Reconsideration and withdrawal of the objections are thus respectfully requested.

Claims 26 and 33 are objected to as containing typographical errors, such as the use of the term "aerobic" instead of "anaerobic" in Claim 26 and the use of the term "lease" instead of "least" in Claim 33. Applicant respectfully submits that the amendments to Claims 26 and 33 obviate the Examiner's objections. Reconsideration and withdrawal of the objections are thus respectfully requested.

Section 112 Rejections

Claims 5-7, 15-17 and 23 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The Examiner alleges that these claims are directed to "reclaiming said flowable impregnating composition". These claims have been amended to further describe the reclaimed composition as being excess composition, i.e., composition not contained within the pores of an impregnated porous article. No new matter is introduced with these

amendments. Reconsideration and withdrawal of the claim rejections are respectfully requested.

Section 102 Rejections

Claims 1-2, 5-6, 9-10, 15-16, 18-23, 25 and 30-31 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 4,517,137 to Schön (hereinafter Schön). Applicant respectfully traverses.

Schön is directed to impregnating carbon electrodes with pitch. The method and apparatus of Schön requires a heating station (B) to heat carbon, such as coal, prior to an impregnate step with pitch. The heating station (B) supplies heat to the process presumably to reduce the viscosity of the pitch thereby allowing the pitch to enter the pores of the carbon and/or to subsequently drive off volatiles to set the pitch within the pores of the carbon.

The invention as presently defined by independent Claim 1 provides an impregnation process, the steps of which comprise:

a.) providing at least one mobile vessel in which impregnation of a porous article can be carried out, with the vessel comprising a chamber for containing a flowable polymerizable impregnating composition and a porous article to be impregnated;

b.) providing a series of stations defining a selection of impregnation sequences, where each of the stations perform at least one specific impregnation step on the porous article within the vessel, where the series of stations are selected from an impregnating composition addition station, a vacuum station, a pressure station, a centrifuge station, a reclaiming station, a retrieval station and combinations thereof;

c.) sequentially directing the vessel to the selected station(s) chosen from the series of stations;

d.) performing the specific impregnation step(s) at the selected station(s); and

e.) providing a polymerization step to polymerize the impregnating composition within the pores of the porous article.

The invention as presently defined by independent Claim 9 provides an impregnation process, the steps of which comprise:

a.) providing at least one mobile vessel containing a flowable polymerizable impregnating composition and a porous article to be impregnated;

b.) providing a series of stations defining a selection of impregnation sequences, where each of the stations perform at least one specific impregnation step on the porous article within the vessel, where the series of stations are selected from an impregnating composition addition station, a vacuum station, a pressure station, a centrifuge station, a reclaiming station, a retrieval station and combinations thereof;

c.) sequentially directing the vessel to the selected station(s) chosen from the series of stations;

d.) performing the specific impregnation step(s) at the selected station(s);

e.) repeating steps c.) and d.) until the one porous article is impregnated with the flowable impregnating composition; and

f.) polymerizing the impregnating composition within the pores of the porous article.

The invention as presently defined by independent Claim 18 provides an impregnation system for impregnating porous articles. The system comprises:

(a) a series of stations defining a selection of impregnated sequences where each of the stations performs at lease one specific impregnation step for impregnating one or more porous articles, where the series of stations are selected from an impregnating composition addition station, a vacuum station, a pressure station, a centrifuge station, a reclaiming station, a retrieval station and combinations thereof;

(b) a mobile vessel for retaining a flowable polymerizable impregnating composition and the porous article to be impregnated, for transporting the composition and the porous article to the series of stations and for providing a closed environment for conducting the impregnation steps;

(c) means for directing the vessel sequentially to the series of stations; and

(d) means for polymerizing the impregnating composition within the pores of the porous article.

In contrast to Schön, independent Claims 1, 9 and 18 have been amended to recite a polymerizable composition and a polymerization step or means for polymerizing the same. Schön fails to disclose, *inter alia*, a polymerizable composition and a polymerization step or means for polymerizing such a composition. The heating step of Schön is not equivalent to the polymerization step of the present invention because the heating step of Schön does not result in the polymerization of the pitch. The required heating step Schön is prior to impregnation of the pitch into the carbon electrodes.

Further, the required heating step of Schön is absent in these amended claims. To read Schön to <u>not</u> require a heating step would be to destroy the reference for what it fully teaches, as the Examiner would be (1) failing to take the reference in its entirety and simply be picking and choosing the requisite elements in an attempt to establish the rejection at hand; and (2) destroying the reference for what it actually does teach by modifying the intent of the reference. *In re Gordon et al.*, 221, US.P.Q. 1125, 1127 (CAFC 1984).

Thus, Schön fails to disclose each and every element as set forth in independent Claims 1, 9, and 18. Therefore, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) of independent Claims 1, 9, and 18, and all claims dependent therefrom, are respectfully requested.

Section 103 Rejections

Claims 3, 4, 8, 11 and 24 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Schön as applied to Claims 1-2, 5-6, 9-10, 15-16, 18-23, 25 and 30-31, and further in view of the admitted state of the prior art. Claims 12-14, 26-29 and 33-35 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Schön in view of the admitted state of the prior art as applied to Claims 3, 4, 8, 11 and 24, and further in view of U.S. Patent No. 4,520,045 to Kutsuna et al. (hereinafter Kutsuna). Claims 7, 17 and 32 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Schön. Applicant respectfully traverses.

The present invention, as defined by independent Claims 1, 9 and 18 above, is noted above and for the sake of brevity is not repeated here. With regard to independent Claims 1, 9, and 18, and all claims dependent therefrom, the present invention, includes a series of stations that are selected from an impregnating composition addition station, a vacuum station, a pressure station, a centrifuge station, a reclaiming station, a retrieval station and combinations thereof. The present invention further includes, *inter alia*, a step for polymerizing a flowable polymerizable impregnating composition or a means for the same.

Schön fails to teach or suggest an impregnation process or system having such a series of stations. Schön further fails to teach or suggest a polymerizable composition and a step or means for polymerizing the same.

Schön teaches the use of pitch as an impregnating composition. No special attributes of the pitch is taught or suggested by Schön and pitch, as typically and commonly provided, is not a polymerizable composition. Pitch is often hardened, in contrast to polymerizing, by solidification via heating. Such heating drives off low molecular weight volatiles through evaporation, allowing the high molecular weight components to solidify. For this reason pitch

is typically hot to facilitate the evaporation of volatile pitch constituents. In contrast, polymerization is a chemical reaction among components and not an evaporative mechanism. Thus, Schön fails to teach or suggest, *inter alia*, a polymerizable composition.

Moreover, Schön fails to teach or suggest that any other composition besides pitch could be used as an impregnant. Schön provides no motivation to change from pitch to another liquid impregnating composition. Thus, Schön provides no motivation to combine its teachings with those that disclose polymerizable impregnating compositions.

Even if Schön is combined with other references, for example Kutsuna or the admitted state of the prior art, the combination would not arrive at the present invention. Schön requires a heating step prior to impregnation. Such a heating step is required apparently to heat the porous articles and subsequently the pitch to allow impregnation of the pitch into the porous articles. Such a heating step would destroy the functionality of Kutsuna and the admitted state of the prior art. Polymerizable compositions would polymerize, partially or completely, with the required pre-impregnation heating step of Schön. Such required heating would destroy the functionality of the present invention and the functionality of the prior art because polymerizable compositions would not impregnate the pores of porous articles. The polymerizable compositions would prematurely polymerize under such heating prior to impregnation into the pores. Thus, because the teachings of Schön would destroy the functionality of impregnation with a polymerizable composition, Schön teaches away from the resent invention.

Furthermore, the Examiner cannot pick and chose among the teachings of Schön to use only those that are favorable to Examiner's position. The Schön reference must be considered for all that it teaches, including the express teaching that a pre-impregnating heating step must be included in its impregnation process and impregnation system.

Thus, Schön teaches away from the present invention and is not combinable with the prior art to arrive at the present invention as set forth in independent Claims 1, 9 and 18, and all claims dependent therefrom.

The invention as presently defined by independent Claim 33 provides an impregnation system for impregnating porous articles. The system comprises:

a series of stations defining a selection of impregnation sequences wherein each of the stations performs at least one specific impregnation step for impregnating one or more porous articles;

at least one mobile vessel for retaining a flowable impregnating composition and the porous article(s) to be impregnated, where the flowable impregnating composition is an anaerobic sealant composition which requires de-aeration prior to use; where the vessel being adapted to transport the composition and the porous article(s) to the series of stations; and where the vessel provides a closed environment for conducting said impregnation step;

means for directing the vessel sequentially to the series of stations; and

means for de-aerating the flowable impregnating composition.

As noted above, independent Claim 33 includes, *inter alia*, an anaerobic sealant composition. Schön and Kutsuna fail to teach or suggest the use of such an anaerobic sealant composition. Therefore, Schön and Kutsuna, individually or in combination, fail to teach or suggest the present invention.

Furthermore, as discussed above, the required heating step of Schön is contrary to functionality of the present invention and to Kutsuna. Kutsuna teaches that its compositions are cured by heating at column 7, lines 11-12. The pre-impregnation heating step of Schön therefore would cure the compositions of Kutsuna prior to impregnation of the compositions into the pores. Such divergent teachings are not properly combinable, and even if such

divergent teachings are combined the functionality of Kutsuna is destroyed by the express teachings of Schön.

Thus, Schön and Kutsuna, individually or in combination, fail to teach or suggest the present invention.

Thus, independent Claims 1, 9, 18 and 33, and all clams dependent therefrom, are patentably distinct over the prior art of record. Reconsideration and withdrawal of the claim rejections are respectfully requested.

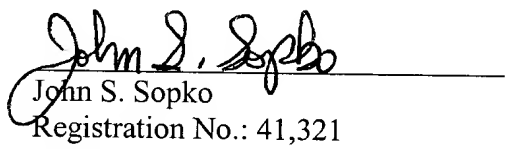
Summary

Therefore, Applicants respectfully submit that independent claims 1, 9, 18 and 33, and all claims dependent therefrom, are patentably distinct. This application is believed to be in condition for allowance. Favorable action thereon is therefore respectfully solicited.

Should the Examiner have any questions or comments concerning the above, the Examiner is respectfully invited to contact the undersigned attorney at the telephone number given below.

The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or credit any overpayment, to Deposit Account No. 08-2461.

Respectfully submitted,



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